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10/005,030	12/03/2001	Yoram Tsarfati	205,413	9532

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EXAMINER

RAMPURIA, SATISH

ART UNIT	PAPER NUMBER
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2191

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,030

Applicant(s)

TSARFATI, YORAM

Examiner

Satish S. Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Amendment

1. This action is in response to the amendment filed on 12/14/2004.
2. The declaration filed on 12/14/2004 under 37 CFR 1.131 is sufficient to overcome the reference US Publication No. 2004/0015809 to Cheng.
3. Claims 1-48 are pending.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 17, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by US Publication No. 2002/00110908 to Cheng et al. (hereinafter called Cheng).

Per claim 1:

Cheng disclose:

- A method for producing embedded software (page 1 [005], “present invention... a code generation automatically” and page 1 [0017], “present invention... discussed... reference to embedded devices”), comprising:

- providing one or more generic application handler programs (page 1 [005], “generating software code for a handler...using... handler function”), each such program comprising computer program code for performing generic application functions common to multiple types of hardware modules used in a communication system (page 1 [0017], “the present invention... used with any operating system” and page 7 [0048], “Automatic code generation saves... time... in a more modular form of the software code for the operating system... transportability of the code”);
- generating specific application handler code (page 1 [0005], “generating software code for a handler function”); and
- compiling the generic application handler programs together with the specific application handler code to produce machine-readable code to be executed by an embedded processor in the at least one of the types of the hardware modules (page 2 [0022], “... executes the software code associated with the handler function... resulting in the complete execution...”).

Although, Cheng discloses generating the application handler code for an embedded devices. Cheng is silent on associate the generic application functions with specific functions of a device driver for at least one of the types of the hardware modules. However, this feature deemed to be inherent to the Cheng system, Cheng system shows generating the application handler code for an embedded devices and any operating system, page 1 [0005]. Cheng system would be inoperative, if generated functions are not compatible with embedded device.

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Claims 17 is the system claim corresponding to method claim 1 and rejected under the same rational set forth in connection with the rejection of claims 1 above, as noted above and Cheng also discloses system, see FIG. 4 and associated text.

Claims 33 is the computer product claim corresponding to method claim 1 and rejected under the same rational set forth in connection with the rejection of claims 1 above

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-15, 18-31, 34, and 39-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng in view of the publication, published by Sun.com (hereinafter called Sun).

Per claim 2:

The rejection of claim 1 is incorporated, and further, Cheng does not explicitly disclose wherein providing the generic application handler programs comprises providing an application program interface (API) to enable a system management program in the communication system to invoke the generic application functions.

However, Sun discloses in an analogous computer system wherein providing the generic application handler programs comprises providing an application program interface (API) to

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enable a system management program in the communication system to invoke the generic application functions (page 4, section The Portable Management Interface (PMI) “The PMI...as a high level API... offers... managed objects”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of providing the generic application handler programs comprises providing an application program interface (API) to enable a system management program in the communication system to invoke the generic application functions as taught by Sun into the method of generating code as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to have APIs to reduce the number of lines of codes to develop a program as taught by Sun (page 7, section Benefits).

Per claim 3:

The rejection of claim 2 is incorporated, and further, Cheng disclose:

- wherein the one or more generic application handler programs comprise a plurality of generic application programs (page 1 [005], “generating software code for a handler...using... handler function”).

Cheng does not explicitly disclose wherein providing the API comprises enabling one of the generic application programs to invoke the generic application functions of another of the generic application programs.

However, Sun discloses in an analogous computer system wherein providing the API comprises enabling one of the generic application programs to invoke the generic application functions of another of the generic application programs (page 4, section The Portable Management Interface (PMI) “The PMI...as a high level API... offers... Management functions... PMI allows and application to perform Get, Set... Action on managed objects”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of providing wherein providing the API comprises enabling one of the generic application programs to invoke the generic application functions of another of the generic application programs as taught by Sun into the method of generating code as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to have APIs to reduce the number of lines of codes to develop a program as taught by Sun (page 7, section Benefits).

Per claims 4 and 5:

The rejection of claim 1 is incorporated, and further, Cheng does not explicitly disclose providing the generic application handler programs comprises providing a performance monitoring handler, including a performance monitoring function for counting selected events relating to performance of the hardware modules.

However, Sun discloses in an analogous computer system providing the generic application handler programs comprises providing a performance monitoring handler, including a performance monitoring function for counting selected events relating to performance of the hardware modules (page 5, section Core Applications “the central tool for monitoring and

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controlling network and system resources... Viewer provides... events and traps... Log viewer... the content of log record”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having an performance monitoring handler to log the events and contents as taught by Sun into the method of generating code for the middleware dives as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to have performance monitoring handler to provide robust network management by decreasing management traffic over the network as taught by Sun (page 1, section TMN Benefits).

Per claims 6 and 9:

The rejection of claim 4 is incorporated, and further, Cheng does not explicitly disclose wherein providing the generic application handler programs further comprises providing an alarm handler, and wherein providing the performance monitoring handler comprises providing a programmable performance threshold and an alarm invocation function, such that when a count of the selected events exceeds the threshold, the performance monitoring handler sends an alarm message to the alarm handler.

However, Sun discloses in an analogous computer system providing the generic application handler programs further comprises providing an alarm handler (page 5, section Core Applications “Alarm manager... simplifies the analysis of event/trap and error reports”), and wherein providing the performance monitoring handler (page 5, section Core Applications “the central tool for monitoring and controlling network and system resources”) comprises providing

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a programmable performance threshold and an alarm invocation function, such that when a count of the selected events exceeds the threshold, the performance monitoring handler sends an alarm message to the alarm handler (page 9, section Benefits “Alarm reporting... allows a managed object class to support the generic notifications for alarm reporting specified...”).

The feature of providing an alarm handler would be obvious for the reasons set forth in the rejection of claim 4.

Per claim 7:

The rejection of claim 1 is incorporated, and further, Cheng does not disclose wherein providing the generic application handler programs comprises providing a maintenance handler, including a testing function for detecting failures in the hardware modules.

However, Sun discloses in an analogous computer system wherein providing the generic application handler programs comprises providing a maintenance handler, including a testing function for detecting failures in the hardware modules (page 4, section The Management Information Server (MIS) “Maintenance of the Managemtn Information... MIS supports dynamic creation, maintenance and deletion of objects in the tree” and page 11 section The Solstice TMN...Product “A Batch Tester engine plays test scenerios and suites... to be created”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of providing wherein providing the generic application handler programs comprises providing a maintenance handler, including a testing function for detecting failures in the hardware modules as taught by Sun into the method of generating code as taught by Cheng. The modification would be obvious because of one of

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ordinary skill in the art would be motivated to have a maintenance handler for testing to provide a robust system as taught by Sun (page 18, section Benefits).

Per claim 8:

The rejection of claim 7 is incorporated, and further, Cheng does not disclose wherein generating the specific application handler code comprises associating the testing function with at least one of a self test and a sanity test of a component in the at least one of the types of the hardware modules.

However, Sun discloses in an analogous computer system wherein generating the specific application handler code comprises associating the testing function with at least one of a self test and a sanity test for a component in the at least one of the types of the hardware modules (page 4, section The Management Information Server (MIS) “Maintenance of the Management Information... MIS supports dynamic creation, maintenance and deletion of objects in the tree” and page 11 section The Solstice TMN...Product “A Batch Tester engine plays test scenarios and suites... to be created”).

The feature of wherein generating the specific application handler code comprises associating the testing function with at least one of a self test and a sanity test of a component in the at least one of the types of the hardware modules would be obvious for the reasons set forth in the rejection of claim 7.

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Per claim 10:

The rejection of claim 1 is incorporated, and further, Cheng does not explicitly disclose wherein providing the generic application handler programs comprises providing a configuration handler, for holding configuration and state information regarding components of the hardware modules.

However, Sun discloses in an analogous computer system providing the generic application handler programs comprises providing a configuration handler, for holding configuration and state information regarding components of the hardware modules (page 5, section Core Applications “Configure Application Tool... allows users to add, modify, or delete applications from the application launcher”).

The feature of providing a configuration handler would be obvious for the reasons set forth in the rejection of claim 4.

Per claim 11:

The rejection of claim 1 is incorporated, and further, Cheng does not explicitly disclose wherein providing the generic application handler programs comprises providing an alarm handler, including functions for receiving and responding to alarm messages generated by others of the application handler programs.

However, Sun discloses in an analogous computer system providing the generic application handler programs comprises providing an alarm handler (page 5, section Core Applications “Alarm manager... simplifies the analysis of event/trap and error reports”), including functions for receiving and responding to alarm messages generated by others of the

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application handler programs (page 9, section Benefits “Alarm reporting... allows a managed object class to support the generic notifications for alarm reporting specified...”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having an alarm handler for notification as taught by Sun into the method of generating code for the middleware dives as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to have alarm handler to provide robust network management by simplifying the event/trap error reports over the network as taught by Sun (page 1, section TMN Benefits).

Per claim 12:

The rejection of claim 11 is incorporated, and further, Cheng does not explicitly disclose wherein providing the alarm handler comprises providing a programmable prioritization function, for determining an order of priority for processing of the alarm messages by the alarm handler.

However, Sun discloses in an analogous computer system wherein providing the alarm handler comprises providing a programmable prioritization function, for determining an order of priority for processing of the alarm messages by the alarm handler (page 5, section Core Applications “Alarm manager... simplifies the analysis of event/trap and error reports” and page 9, section Benefits “Alarm reporting... allows a managed object class to support the generic notifications for alarm reporting specified...”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having an alarm handler for notification as taught by Sun into the method of generating code for the middleware dives as taught by Cheng.

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The modification would be obvious because of one of ordinary skill in the art would be motivated to have alarm handler to provide robust network management by simplifying the event/trap error reports over the network as taught by Sun (page 1, section TMN Benefits).

Per claim 13:

The rejection of claim 11 is incorporated, and further, Cheng does not explicitly disclose wherein generating the specific application handler code comprises specifying a component in one of the types of the hardware modules to actuate so as to notify a user of the system of the alarm message.

However, Sun discloses in an analogous computer system wherein generating the specific application handler code comprises specifying a component in one of the types of the hardware modules to actuate so as to notify a user of the system of the alarm message (page 5, section Core Applications “Alarm manager... simplifies the analysis of event/trap and error reports” and page 9, section Benefits “Alarm reporting... allows a managed object class to support the generic notifications for alarm reporting specified...”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having an alarm handler for notification as taught by Sun into the method of generating code for the middleware dives as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to have alarm handler to provide robust network management by simplifying the event/trap error reports over the network as taught by Sun (page 1, section TMN Benefits).

Per claim 14:

The rejection of claim 11 is incorporated, and further, Cheng does not explicitly disclose wherein generating the specific application handler code further comprises specifying one of the generic application functions of another of the generic application handler programs to invoke in response to the alarm message.

However, Sun discloses in an analogous computer system wherein generating the specific application handler code further comprises specifying one of the generic application functions of another of the generic application handler programs to invoke in response to the alarm message (page 5, section Core Applications “Alarm manager... simplifies the analysis of event/trap and error reports” and page 9, section Benefits “Alarm reporting... allows a managed object class to support the generic notifications for alarm reporting specified...”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having an alarm handler for notification as taught by Sun into the method of generating code for the middleware dives as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to have alarm handler to provide robust network management by simplifying the event/trap error reports over the network as taught by Sun (page 1, section TMN Benefits).

Per claim 15:

The rejection of claim 11 is incorporated, and further, Cheng does not explicitly disclose wherein responding to the alarm messages comprises sending a notification of the alarm message from the alarm handler to a system management program.

However, Sun discloses in an analogous computer system wherein responding to the alarm messages comprises sending a notification of the alarm message from the alarm handler to a system management program (page 5, section Core Applications “Alarm manager... simplifies the analysis of event/trap and error reports” and page 9, section Benefits “Alarm reporting... allows a managed object class to support the generic notifications for alarm reporting specified...”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having an alarm handler for notification as taught by Sun into the method of generating code for the middleware dives as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to have alarm handler to provide robust network management by simplifying the event/trap error reports over the network as taught by Sun (page 1, section TMN Benefits).

Claims 18, 19, and 23-24 are the system claim corresponding to method claim 2, 3, and 7-8 respectively, and rejected under the same rational set forth in connection with the rejection of claims 2, 3, and 7-8 respectively, above, as noted above and Cheng also discloses system, see FIG. 4 and associated text.

Claims 20-22, and 25-31 are the system claim corresponding to method claims 4-6, and 9-15 respectively, and rejected under the same rational set forth in connection with the rejection of claims 4-6, and 9-15 respectively, above, as noted above and Cheng also discloses system, see FIG. 4 and associated text.

Claims 34 and 39-40 are the computer product claim corresponding to method claim 2 and 7-8 respectively, and rejected under the same rational set forth in connection with the rejection of claims 2 and 7-8 respectively, above.

Claims 36-38 and 41-47 are the computer product claim corresponding to method claims 4-6, and 9-15 respectively, and rejected under the same rational set forth in connection with the rejection of claims 4-6, and 9-15 respectively, above.

8. Claim 16, 32, and 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng in view of US Publication No. 2005/0078611 to Little et al. (hereinafter called Little).

Per claim 16:

The rejection of claim 1 is incorporated, and further, Cheng discloses:

- wherein generating the specific application handler code comprises defining specific elements to be handled by the generic application functions for the at least one of the types of the hardware modules (page 1 [0005], “generating software code for a handler function” and page 2 [0020], “Handler cod generation...edit parameters... file... contain... parameter definitions and the static initialized handler definitions”),

Cheng does not explicitly disclose registering one of the specific functions of the device driver for use in handing each of the defined specific elements.

However, Little discloses in an analogous computer system registering one of the specific functions of the device driver for use in handling each of the defined specific elements (page 26 [0384] "...register a transition with state distributor 308... to register a transition with state distributor 308, the state information client process will specify what event the client is registering for, and what function will be performed when a particular state changes...).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of registering one of the specific functions of the device driver for use in handling each of the defined specific elements as taught by Adams into the method of generating code as taught by Cheng. The modification would be obvious because of one of ordinary skill in the art would be motivated to register the functions to provide the flexible network as taught by Little (page 4 [0108]).

Claims 32 and 48 are the system claim corresponding to method claim 16 and rejected under the same rationale set forth in connection with the rejection of claim 16 above, as noted above and Cheng also discloses system, see FIG. 4 and associated text.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Satish S. Rampuria** whose telephone number is **(571) 272-3732**. The examiner can normally be reached on **8:30 am to 5:00 pm** Monday to Friday except every


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other Friday and federal holidays. Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: 571-272-2100**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Tuan Q. Dam** can be reached on **(571) 272-3695**. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria
Patent Examiner
Art Unit 2191
06/13/2005



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